

IN THE CLAIMS:

Please add new Claims 11 and 12 as follows. The claims, as pending in the subject application, read as follows:

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1. (Previously Presented) A quantization method in which quantization processing is applied to data for first and second recording means which record input image data in a plurality of gradations which belong to each of different gradations in substantially the same hue, comprising the steps of:

inputting multi-value level image data;

a first quantization step of performing quantization of the image data input for the first recording means to data with a lower level than that of the input image data, the first quantization step performing the quantization by conducting error correction; and

a second quantization step of performing quantization of the image data input for the second recording means to data with a lower level than that of the input image data, the second quantization step performing the quantization without conducting error correction,

wherein at least one of the first and second quantization steps performs quantization of the input image data to multi-value data with 3 or more levels, so that the corresponding one of the first and second recording means may record the image in a plurality of gradations,

wherein the first recording means records the image with lower density recording material than that used by the second recording means.

2. (Previously Presented) A recording apparatus which includes first and second recording means which record input image data in a plurality of gradations which belong to each of different gradations in substantially the same hue, comprising:

input means for inputting multi-value level image data;

first quantization means for performing quantization of the image data input for the first recording means to a data with a lower level than that of the input image data, the first quantization means performing the quantization by conducting error correction; and

second quantization means for performing quantization of the image data input for the second recording means to a data with a lower level than that of the input image data, the second quantization means performing the quantization without conducting error correction,

wherein the first and second recording means record the input image data respectively in first and second gradations according to a quantization result from the first quantization means, at least one of the first and second quantization means performs quantization of the input image data to multi-value data with 3 or more levels and the corresponding one of the first and second recording means record the image in a plurality of gradations,

wherein the first recording means records the image with lower density recording material than that used by the second recording means.

3. (Original) The recording apparatus according to claim 2, wherein the first and second recording means record the image by an ink-jet system in which recording is effected by attaching an ink drop onto a recording medium.

4. (Original) The recording apparatus according to claim 3, wherein the first and second recording means record the image with light ink and black ink.

5. (Original) The recording apparatus according to claim 4, wherein a size of the ink drop is controlled when the first and second recording means effect recording in a plurality of gradations.

6. (Original) The recording apparatus according to claim 2, wherein not only recording is executed by using both of the first and second recording means according to a level of the input image data, but the first and second recording means share a region in which both means effect recording while both raising recording levels.

7. (Previously Presented) A storage medium from which a computer can readout a control program which is used for performing quantization of data for first and second recording means which record input image data in a plurality of gradations which belong to each of different gradations in substantially the same hue, comprising:

a first quantization step module for performing quantization of the image data input for the first recording means to data with a lower level than that of the input

image data, the first quantization step performing the quantization by conducting error correction;

a second quantization step module for performing quantization of the image data input for the second recording means to data with a lower level than that of the input image data, the second quantization step performing the quantization without conducting error correction; and

an output step module for outputting results from the first and second quantization steps, wherein one of the first and second quantization step modules perform quantization of the input image data to multi-value data with 3 or more levels so that the corresponding one of the first and second recording means may record the image in a plurality of gradations,

wherein the first recording means records the image with lower density recording material than that used by the second recording means.

8. (Previously Presented) The quantization method according to Claim 1, wherein in said first quantization step, quantization of the image data is performed by using an error diffusion method, and in said second quantization step, quantization of the image data is performed by using a dither method.

9. (Previously Presented) The recording apparatus according to Claim 2, wherein quantization of the image data by the first quantization means is performed by using an error diffusion method, and quantization of the image data by the second quantization means is performed by using a dither method.

10. (Previously Presented) The storage medium according to Claim 7, wherein in said first quantization step, quantization of the image data is performed by using an error diffusion method, and in said second quantization step, quantization of the image data is performed by using a dither method.

11. (New) A printing system for recording a multi-tone image, comprising:
a print head, from which first and second inks of different densities are dischargeable, for printing dots of different sizes by using each one of said first and second inks;

input means for inputting multi-value image data;

first quantization means for quantizing the input image data to first data defining the size of dots printed by the first ink;

second quantization means for quantizing the input image data to second data defining the size of dots printed by the second ink; and

control means for causing said print head to print, by the first ink, a first dot having the size corresponding to the first data and to overlay, by the second ink, a second dot having the size corresponding to the second data on the first dot.

12. (New) A method of controlling a print head from which first and second inks of different densities are dischargeable and which prints dots of different sizes by using each one of said first and second inks, comprising the steps of:

an input step of inputting multi-value image data;

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a first quantization step of quantizing the input image data to first data
defining the size of dots printed by the first ink;

a second quantization step of quantizing the input image data to second data
defining the size of dots printed by the second ink; and

a control step of causing said print head to print, by the first ink, a first dot
having the size corresponding to the first data and to overlay, by the second ink, a second
dot having the size corresponding to the second data on the first dot.
